Executive Commentary

During 1998, a total of 18,361 TB cases (6.8 cases per 100,000 population) were reported to CDC from the 50 states and the District of Columbia, representing a 7.5% decrease from 1997 and a 31% decrease from 1992, when the number of cases peaked during the resurgence of TB in the United States. The national TB case rate also steadily decreased during this period (Table 1). In 1998, 6% of cases were reported in children under 15 years old, 8% in persons aged 15-24 years, 35% in persons aged 25-44 years, 27% in persons aged 45-64 years, and 24% in persons aged 65 years and older (Table 2). During 1992-1998, there was a decline in both the number of cases reported in each of these age groups and the respective TB case rates.

An important consideration is that the overall national trends reflect the impact of varying changes within population subgroups. For example, the overall decrease in TB cases during 1992-1998 primarily reflected a 44% decrease in the number of cases among U.S.-born persons, with substantial declines in all age groups. In contrast, the total number of cases among foreign-born persons increased 4% during this period, reflecting a small increase among adults aged 25-44 years, a larger increase among adults aged ≥45 years, and a substantial decline among children aged <15 years. In terms of case rates, there was a 46% decrease in the case rate among U.S.-born persons (from 8.2 to 4.4 per 100,000), and there was an 18% decrease in the case rate among foreign-born persons (from 34 to 28 per 100,000).

The overall trends also reflect the impact of changes by geographic location. For example, during 1992-1998, the seven states (California, Florida, Georgia, Illinois, New Jersey, New York, and Texas) reporting the highest number of cases (60% of the total number of U.S. cases in 1998) experienced a substantial decrease in both the annual number of reported cases and case rate. Overall substantial decreases also occurred in 14 other states during the 7 year period. In the remaining 23 states and the District of Columbia, annual case counts fluctuated (e.g. an increase followed by a decrease) or remained relatively stable during 1992-1998. Most of these states had case rates below 3.5 per 100,000 (17 states) or reported less than 100 cases (16 states) in 1998.

The resurgence of TB in the United States in the late 1980s and early 1990s was associated with the emergence of multidrug-resistant TB (MDR TB) and the HIV/AIDS epidemic.[1,2] Analysis of initial drug susceptibility test results for isolates from persons with culture-positive TB found a relatively stable level of resistance to at least isoniazid and a decreasing level of MDR TB during 1993-1997.[3,4] Data from cases reported during 1998 confirm these trends, with 8% of isolates resistant to at least isoniazid and 1.1% resistant to at least isoniazid and rifampin (MDR TB) (Table 21). The decrease in the level of MDR TB was influenced by a substantial decrease in New York City; however, during 1993-1998, the proportion of MDR TB cases reported from U.S. areas excluding New York City decreased from 1.7% to 0.9%.

Incomplete reporting has limited the analysis of national TB surveillance data by HIV status. Reporting of HIV status has improved slowly since 1993, the year such information was first included on TB case reports submitted to CDC. In 1998, 55% of TB case reports for persons aged 25-44 years included information about HIV status. Twenty-one states and New York City reported this information for at least 75% of cases among persons in this age group (Table 22). To help estimate the proportion of reported TB cases with HIV coinfection, state health departments have compared TB and AIDS registries.[5] Using registry match data to supplement reported HIV test results on the individual TB case report, minimum estimates of the proportion with HIV coinfection range from 15% in 1993-1994 to 10% in 1997 for persons of all ages reported with TB and from 29% in 1993-1994 to 21% in 1997 for persons aged 25 to 44 (CDC,

unpublished data). The impact of the HIV/AIDS epidemic also differs by geographic location. For example, in 1998, over 35% of TB cases in persons aged 25-44 years reported from Delaware, Florida, and New York City were coinfected with HIV, whereas (among states with more than 5 cases in this age group), <10% of cases from Ohio, South Carolina, and Wisconsin were reported with HIV coinfection.

During 1992-1998, the declines in the overall number of reported TB cases and in the level of MDR TB appear to reflect successful efforts to strengthen TB control following the resurgence of TB and the emergence of MDR TB. Emphasizing the first priority of TB control[6] (i.e., promptly identifying persons with TB, initiating appropriate therapy, and ensuring completion of therapy) has likely been the most important factor in achieving this improvement, through the reduction of community transmission of *M. tuberculosis*, particularly in areas with a high incidence of AIDS.[7] Improvements in infection control practices in nosocomial and other congregate settings, declining AIDS incidence, and the decreasing number of MDR TB cases also appear to have contributed to the overall decrease; however, the contribution of these factors has been difficult to measure. The substantial decline in both the number of reported cases among U.S.-born persons and the case rate for U.S.-born persons supports these inferences. In comparison, the relatively stable number of reported cases among foreign-born persons along with the modest decline in the case rate among foreign-born persons is consistent with other analyses of TB surveillance data that indicate that most cases of TB among foreign-born persons residing in the United States result from infection with *M. tuberculosis* in the person's country of birth.[8] As the percentage of reported TB cases among foreign-born persons continues to increase, the elimination of TB in the United States will depend increasingly on the elimination of TB among foreign-born persons.[9] CDC, in collaboration with state and local health departments, recently published recommendations for enhancing TB control efforts in the foreign-born,[9] and is currently working with these jurisdictions to expand efforts based on these recommendations.

To move from TB control to TB elimination in the United States, the Advisory Council for the Elimination of Tuberculosis has emphasized that existing efforts must be sustained and enhanced.[10] Monitoring the success of these efforts depends on continued surveillance at the national, state, and local levels. The expanded national TB surveillance system has proven its usefulness in assisting with this important activity, particularly through the collection of data on initial drug susceptibility results. Further assessment includes another important benchmark of TB program success: the rate of completion of therapy. Future evaluation of trends in completion of therapy, based on analysis of data collected through national surveillance (Table 26), will also assist in measuring continued progress.

References

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